

## POWER OF ATTORNEY FROM ASSIGNEE

Docket No.: **0652.2180001/EKS/Y-W**

**Boehringer Ingelheim International GmbH**, a corporation of Germany, having a principal place of business at Binger Straße 173, D-55216 Ingelheim am Rhein, is assignee of the entire right, title and interest for the United States of America (as defined in 35 U.S.C. § 100), by reason of an Assignment to the Assignee executed on  
1) 2/22/02 2) 2/20/02 3) 2/21/02 4) 3/21/02 and  
5) 2/22/02 of an invention known as **Methods for Large Scale Protein Production in Prokaryotes** (Attorney Docket No. **0652.2180001/EKS/Y-W**), which is disclosed and claimed in a patent application of the same title by the inventors 1) Jiradej MANOSROI, 2) Aranya MANOSROI, 3) Chatchai TAYAPIWATANA, 4) Friedrich GOETZ and 5) Rolf-Guenter WERNER (said application filed on November 14, 2001 at the U.S. Patent and Trademark Office, having Application Number 09/987,457).

The Assignee hereby appoint the U.S. attorneys associated with **CUSTOMER NUMBER 28393** to prosecute this application and any continuation, divisional, continuation-in-part, or reissue application thereof, and to transact all business in the U.S. Patent and Trademark Office connected therewith, such attorneys currently being: Robert Greene Sterne, Esq., Reg. No. 28,912; Edward J. Kessler, Esq., Reg. No. 25,688; Jorge A. Goldstein, Esq., Reg. No. 29,021; David K.S. Cornwell, Esq., Reg. No. 31,944; Robert W. Esmond, Esq., Reg. No. 32,893; Tracy-Gene G. Durkin, Esq., Reg. No. 32,831; Michele A. Cimbala, Esq., Reg. No. 33,851; Michael B. Ray, Esq., Reg. No. 33,997; Robert E. Sokohl, Esq., Reg. No. 36,013; Eric K. Steffe, Esq., Reg. No. 36,688; Michael Q. Lee, Esq., Reg. No. 35,239; Steven R. Ludwig, Esq., Reg. No. 36,203; John M. Covert, Esq., Reg. No. 38,759; Linda E. Alcorn, Esq., Reg. No. 39,588; Lawrence B. Bugaisky, Esq., Reg. No. 35,086; Donald J. Featherstone, Esq., Reg. No. 33,876; and Robert C. Millonig, Esq., Reg. No. 34,395. The Assignee hereby grants said attorneys the power to insert on this Power of Attorney any further identification that may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office.

Send correspondence to:

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Direct phone calls to 202-371-2600.

FOR: **Boehringer Ingelheim International GmbH**  
ppa i.v.  
SIGNATURE: [Signature] [Signature]  
BY: **Dr. Dieter LAUDIEN** **Marion HOSS**  
TITLE: **Head of Patent Division** **Authorised person of Patent Division**  
DATE: March 27, 2002



Certificate Under 37 C.F.R. § 3.73(b)

Docket No. 0652.2180001/EKS/Y-W

Applicant: MANOSROI et al.

Application No.: 09/987,457

Filed: November 14, 2001

Entitled: Methods for Large Scale Protein Production in Prokaryotes

Boehringer Ingelheim International GmbH, a corporation

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. ☒ the assignee of the entire right, title, and interest, or
2. ☐ an assignee of an undivided part interest

in the patent application/patent identified above by virtue of either:

- A. ☒ An Assignment from the inventors of the patent application/patent identified above. The assignment was recorded in the Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

OR

- B. ☐ A chain of title from the inventor(s) of the patent application/patent identified above to the current assignee as shown below:

1. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the Patent and Trademark Office at  
Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.
2. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the Patent and Trademark Office at  
Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.
3. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the Patent and Trademark Office at  
Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet.

☒ Copies of assignments or other documents in the chain of title are attached.


[NOTE: A separate copy (i.e., the original assignment document or a true copy of the original document) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the PTO. See MPEP 302-302.8]

The undersigned (whose title is supplied below) is empowered to act on behalf of the assignee.

Date: March 27, 2002

Name: Dr. Dieter LAUDIEN

Title: Head of Patent Division

Signature: 

ASSIGNMENT

Docket No. 0652.2180001/EKS/Y-W

In consideration of the sum of One Dollar (\$1.00) or equivalent and other good and valuable consideration paid to each of the undersigned inventors: 1) Jiradej MANOSROI, 2) Aranya MANOSROI, 3) Chatchai TAYAPIWATANA, 4) Friedrich GOETZ and 5) Roth-Guenther WERNER, the undersigned inventors hereby sell(s) and assign(s) to Boehringer Ingelheim International GmbH (the Assignee) his/her entire right, title and interest, including the right to sue for past infringement and to collect for all past, present and future damages:

*check applicable box(es)* ☒ for the United States of America (as defined in 35 U.S.C. § 100),  
☒ and throughout the world,

(a) in the invention(s) known as Methods for Large Scale Protein Production in Prokaryotes for which application(s) for patent in the United States of America has (have) been executed by the undersigned on 1) 5/17/02 2) 5/17/02  
3) 5/17/02 4) 5/31/02 and 5) 6/4/02 (also known as United States Application No. 09/987,457, filed November 14, 2001), in any and all applications thereon, in any and all Letters Patent(s) therefor, and

(b) in any and all applications that claim the benefit of the patent application listed above in part (a), including continuing applications, reissues, extensions, renewals and reexaminations of the patent application or Letters Patent therefor listed above in part (a), to the full extent of the term or terms for which Letters Patents issue, and

(c) in any and all inventions described in the patent application listed above in part (a), and in any and all forms of intellectual and industrial property protection derivable from such patent application, and that are derivable from any and all continuing applications, reissues, extensions, renewals and reexaminations of such patent application, including, without limitation, patents, applications, utility models, inventor's certificates, and designs together with the right to file applications therefor; and including the right to claim the same priority rights from any previously filed applications under the International Agreement for the Protection of Industrial Property, or any other international agreement, or the domestic laws of the country in which any such application is filed, as may be applicable;

all such rights, title and interest to be held and enjoyed by the above-named Assignee, its successors, legal representatives and assigns to the same extent as all such rights, title and interest would have been held and enjoyed by the Assignor had this assignment and sale not been made.


The undersigned inventor(s) agree(s) to execute all papers necessary in connection with the application(s) and any continuing (continuation, divisional, or continuation-in-part), reissue, reexamination or corresponding application(s) thereof and also to execute separate assignments in connection with such application(s) as the Assignee may deem necessary or expedient.


The undersigned inventor(s) agree(s) to execute all papers necessary in connection with any interference or patent enforcement action (judicial or otherwise) related to the application(s) or any continuing (continuation, divisional, or continuation-in-part), reissue or reexamination application(s) thereof and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference or patent enforcement action.


The undersigned inventor(s) hereby represent(s) that he/she has full right to convey the entire interest herein assigned, and that he/she has not executed, and will not execute, any agreement in conflict therewith.

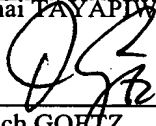
The undersigned inventor(s) hereby grant(s) Robert Greene Sterne, Esquire, Registration No. 28,912; Edward J. Kessler, Esquire, Registration No. 25,688; Jorge A. Goldstein, Esquire, Registration No. 29,021; David K.S. Cornwell, Esquire, Registration No. 31,944; Robert W. Esmond, Esquire, Registration No. 32,893; Tracy-Gene G. Durkin, Esquire, Registration No. 32,831; Michele A. Cimbala, Esquire, Registration No. 33,851; Michael B. Ray, Esquire, Registration No. 33,997; Robert E. Sokohl, Esquire, Registration No. 36,013; Eric K. Steffe, Esquire, Registration No. 36,688; Michael Q. Lee, Esquire, Registration No. 35,239; Steven R. Ludwig, Esquire, Registration No. 36,203; John M. Covert, Esquire, Registration No. 38,759; Linda E. Alcorn, Esquire, Registration No. 39,588; Lawrence B. Bugaisky, Esquire, Registration No. 35,086; Donald J. Featherstone, Esquire, Registration No. 33,876; and Robert C. Millonig, Esquire, Registration No. 34,395, all of STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C., 1100 New York Avenue, N.W., Suite 600, Washington, D.C. 20005-3934, power to insert in this assignment any further identification that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

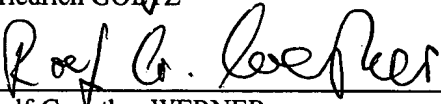
IN WITNESS WHEREOF, executed by the undersigned inventor(s) on the date opposite his/her name.

Date: Feb 22, 2002 Signature of Inventor:   
Jiradej MANOSROI

Date: 20 Feb 2002 Signature of Inventor:   
Aranya MANOSROI

Date: 21 FEB 2002 Signature of Inventor:   
Chatchai TAYAPIWATANA

Date: 21 March 2002 Signature of Inventor:   
Friedrich GORTZ

Date: 22 FEB 2002 Signature of Inventor:   
Rolf-Guenther WERNER